

WHAT IS CLAIMED IS:

1. A coil for an electric rotating machine,
comprising:

5 a conductor configured by bundling a plurality of
square strands and stacking the square strands like a
coil with Roebel transposition;

a mica tape which is wound a plurality of layers
around on a surface of the conductor and made up of a
mica paper and a cloth backing material;

10 an insulation layer formed with impregnating and
curing resin between wound layers of the mica tape; and

inorganic particles supported with the mica tape
using an adhesive containing a glue insoluble in the
impregnated resin as a component.

15 2. A coil for an electric rotating machine,
comprising:

a conductor configured by bundling a plurality of
square strands and stacking the square strands like a
coil with Roebel transposition;

20 a mica tape which is wound a plurality of layers
around an outer surface of the conductor and made up of
a mica paper and a cloth backing material;

an insulation layer formed by impregnating and
curing resin between wound layers of the mica tape; and

25 inorganic particles supported with the cloth
backing material of the mica tape using an adhesive
containing a glue insoluble in the impregnated resin as

a component.

3. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is a polyvinyl-based polymer.

5 4. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is 0.5 wt% to 5 wt% with respect to the adhesive.

10 5. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is a polyvinyl-based polymer, and the polyvinyl-based polymer is 0.5 wt% to 5 wt% with respect to the adhesive.

15 6. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the inorganic particles include at least one of aluminum oxide (Al_2O_3), beryllium oxide (BeO), magnesium oxide (MgO), aluminum nitride (AlN), boron nitride (BN), and silicon carbide (SiC).

20 7. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is polyvinyl alcohol.

25 8. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is polyvinyl alcohol, and the polyvinyl alcohol is 0.5 wt% to 5 wt% with respect to the adhesive.

9. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is a condensation polymer of polyvinyl alcohol and aldehyde and is polyvinyl acetal having acetal bonds in molecules thereof.

10. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive is a condensation polymer of polyvinyl alcohol and aldehyde and is polyvinyl acetal having acetal bonds in molecules thereof, and the polyvinyl acetal is 0.5 wt% to 5 wt% with respect to the adhesive.

11. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive includes at least one of polyvinyl alcohol and polyvinyl acetal.

12. The coil for an electric rotating machine according to one of claims 1 and 2, wherein the glue contained in the adhesive includes at least one of polyvinyl alcohol and polyvinyl acetal, and the glue is 0.5 wt% to 5 wt% with respect to the adhesive.

13. A mica tape used for insulating a coil of an electric rotating machine, comprising:

a mica paper;
a glass cloth backing of the mica paper; and
inorganic particles supported by the glass cloth backing using an adhesive containing a glue insoluble

in impregnating resin as an indispensable component.

14. The mica tape according to claim 13, wherein the adhesive is a polyvinyl-based polymer, and the inorganic particles are aluminum oxide particles.

5 15. The mica tape according to claim 13, wherein the adhesive is a polyvinyl-based polymer, and the inorganic particles are boron nitride particles.

16. A mica sheet used for insulating a coil of an electric rotating machine, comprising:

10 a mica paper;

 a glass cloth backing of the mica paper; and

 inorganic particles supported by the glass cloth backing using an adhesive containing a glue insoluble in impregnating resin as an indispensable component.

15 17. The mica sheet according to claim 16, wherein the adhesive is a polyvinyl-based polymer, and the inorganic particles are aluminum oxide particles.

 18. The mica sheet according to claim 16, wherein the adhesive is a polyvinyl-based polymer, and the
20 inorganic particles are boron nitride particles.